

**CLAIM AMENDMENTS**

Claims 1-43 are pending in the application.

Claims 6-11, 13-16, 18-20, 26, 27, 29-31, 34-36, 38 and 40-42 were withdrawn from consideration.

Claims 1-5, 12, 17, 21-25, 28, 32, 33, 37, 39 and 43 were rejected.

Please amend the claims as follows:

1. (currently amended) A method of increasing the triacylglyceride production comprising:

~~content of an organism which comprises expressing in~~ transforming the an organism with an introduced DNA encoding a protein having glycerol-3-phosphate acyltransferase (GPAT) activity; and

harvesting the triacylglycerides from the organism.

2. (previously presented) The method of claim 1, wherein the organism is a plant.

3. (previously presented) The method of claim 2, wherein the plant is an oilseed bearing plant.

4. (previously presented) The method of claim 2, wherein the plant is of the genus *Brassica*.

5. (previously presented) The method of claim 2, wherein the plant is *Arabidopsis thaliana*.

6. (withdrawn) The method of claim 1, wherein the organism is a yeast.

7. (withdrawn) The method of claim 1, wherein the DNA encodes a protein comprising a sequence that differs from SEQ ID NO: 6 but has at least 70% sequence homology with SEQ ID NO: 6 and the same function as the protein of SEQ ID NO: 6.

8. (withdrawn) The method of claim 1, wherein the DNA comprises a sequence encoding a protein comprising SEQ ID NO: 6.

9. (withdrawn) The method of claim 1, wherein the DNA encodes a protein comprising a sequence that differs from SEQ ID NO: 9 but has at least 70% sequence homology with SEQ ID NO: 9 and the same function as

the protein of SEQ ID NO: 9.

10. (withdrawn) The method of claim 1, wherein the DNA comprises a sequence encoding a protein comprising SEQ ID NO: 9.

11. (withdrawn) The method of claim 1, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 1, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 1.

12. (previously presented) The method of claim 1, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 2, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 2.

13. (withdrawn) The method of claim 1, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 3, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 3.

14. (withdrawn) The method of claim 1, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 4, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 4.

15. (withdrawn) The method of claim 1, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 5, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 5.

16. (withdrawn) A method of increasing the triacylglyceride content of an organism by transforming the organism with a vector, wherein the vector comprises a DNA encoding a protein comprising SEQ ID NO: 6, or a protein having the same function comprising a sequence having at least 70% homology with SEQ ID NO: 6.

17. (currently amended) A method of increasing—the triacylglyceride production comprising:  
~~content of an organism by transforming the an~~ organism with a vector, wherein the vector comprises a DNA encoding a protein comprising SEQ ID NO: 7, or a protein having the same function comprising a sequence having at least 70% homology with SEQ ID NO: 7; and

harvesting the triacylglycerides from the organism.

18. (withdrawn) A method of increasing the triacylglyceride

content of an organism by transforming the organism with a vector, wherein the vector comprises a DNA encoding a protein comprising SEQ ID NO: 8, or a protein having the same function comprising a sequence having at least 70% homology with SEQ ID NO: 8.

19. (withdrawn) A method of increasing the triacylglyceride content of an organism by transforming the organism with a vector, wherein the vector comprises a DNA encoding a protein comprising SEQ ID NO: 9, or a protein having the same function comprising a sequence having at least 70% homology with SEQ ID NO: 9.

20. (withdrawn) A method of increasing the triacylglyceride content of an organism by transforming the organism with a vector, wherein the vector comprises a DNA encoding a protein comprising SEQ ID NO: 10, or a protein having the same function comprising a sequence having at least 70% homology with SEQ ID NO: 10.

21. Cancelled

22. Cancelled

23. Cancelled

24. Cancelled

25. Cancelled

26. (withdrawn) The non-human organism of claim 21, wherein the organism is a yeast.

27. (withdrawn) The non-human organism of claim 21, wherein the DNA encodes a protein comprising SEQ ID NO: 6, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 6.

28. Cancelled

29. (withdrawn) The non-human organism of claim 21, wherein the DNA encodes a protein comprising SEQ ID NO: 8, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 8.

30. (withdrawn) The non-human organism of claim 21, wherein

the DNA encodes a protein comprising SEQ ID NO: 9, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 9.

31. (withdrawn) The non-human organism of claim 21, wherein the DNA encodes a protein comprising SEQ ID NO: 10, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 10.

32. Cancelled

33. Cancelled

34. (withdrawn) The non-human organism of claim 21, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 3, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 3.

35. (withdrawn) The non-human organism of claim 21, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 4, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 4.

36. (withdrawn) The non-human organism of claim 21, wherein the DNA is a DNA having a sequence as recited in SEQ ID NO: 5, or a variant thereof having at least 70% sequence identity to SEQ ID NO: 5.

37. Cancelled

38. (withdrawn) The vector of claim 37, wherein the vector comprises DNA encoding a protein comprising SEQ ID NO: 6, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 6.

39. Cancelled

40. (withdrawn) The vector of claim 37, wherein the vector comprises DNA encoding a protein comprising SEQ ID NO: 8, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 8.

41. (withdrawn) The vector of claim 37, wherein the vector comprises DNA encoding a protein comprising SEQ ID NO: 9, or a protein having the same function comprising a sequence having at least 70% sequence

homology with SEQ ID NO: 9.

42. (withdrawn) The vector of claim 37, wherein the vector comprises DNA encoding a protein comprising SEQ ID NO: 10, or a protein having the same function comprising a sequence having at least 70% sequence homology with SEQ ID NO: 10.

43. Cancelled

44. (new) The method according to claim 1 including growing the organism under conditions such that said glycerol-3-phosphate acyltransferase is expressed prior to harvesting.

45. (new) The method according to claim 1 wherein the organism has higher triacylglyceride content compared to a control organism.

46. (new) The method of claim 1, wherein the DNA encodes a protein comprising a sequence that differs from SEQ ID NO: 7 but has at least 70% sequence homology with SEQ ID NO: 7 and the same function as the protein of SEQ ID NO: 7.

47. (new) The method of claim 1, wherein the DNA comprises a sequence encoding a protein comprising SEQ ID NO: 7.

48. (new) The method of claim 1, wherein the DNA encodes a protein comprising a sequence that differs from SEQ ID NO: 8 but has at least 70% sequence homology with SEQ ID NO: 8 and the same function as the protein of SEQ ID NO: 8.

49. (new) The method of claim 1, wherein the DNA comprises a sequence encoding a protein comprising SEQ ID NO: 8.

50. (new) The method of claim 1, wherein the DNA encodes a protein comprising a sequence that differs from SEQ ID NO: 10 but has at least 70% sequence homology with SEQ ID NO: 10 and the same function as the protein of SEQ ID NO: 10.

51. (new) The method of claim 1, wherein the DNA comprises a sequence encoding a protein comprising SEQ ID NO: 10.